

WHAT IS CLAIMED IS:

1. A fluid for replacing target receptor molecules contaminated with at least one inflammatory mediator removed from a patient's blood during hemofiltration comprising a pharmaceutical grade solution having corresponding clean target receptor molecules which are not contaminated.

2. The fluid of Claim 1 wherein the hemofiltration comprises using a very large pore hemofilter.

3. The fluid of Claim 1 further comprising a concentration of albumin in the fluid greater than approximately 0.5 grams per one hundred milliliters.

4. The fluid of Claim 1 further comprising a concentration of albumin in the fluid less than approximately twenty grams per one hundred milliliters.

5. The fluid of Claim 1 further comprising a plurality of clean target receptor molecules corresponding with a plurality of target receptor molecules contaminated with more than one inflammatory mediator removed from the patient's blood.

5 6. A fluid for replacing target receptor molecules contaminated with at least one toxin removed from a patient's blood during hemofiltration comprising a pharmaceutical grade solution having corresponding clean target receptor molecules which are not contaminated.

7. The fluid of Claim 6 wherein the hemofiltration comprises using a very large pore hemofilter.

8. The fluid of Claim 6 further comprising a concentration of albumin in the fluid greater than approximately 0.5 grams per one hundred milliliters.

9. The fluid of Claim 6 further comprising a concentration of albumin in the fluid less than approximately twenty grams per one hundred milliliters.

20 10. The fluid of Claim 6 further comprising a plurality of clean target receptor molecules corresponding with a plurality of target receptor molecules contaminated with more than one toxin removed from the patient's blood.

11. A replacement fluid kit for attachment to an extracorporeal blood circuit during hemofiltration, the kit comprising:

5 a replacement fluid and a reservoir for the replacement fluid;

the reservoir having at least one port operable to communicate replacement fluid from the reservoir;

a coupling operable to allow flow of the replacement fluid from the port to the extracorporeal blood circuit; and

the replacement fluid formed in part by a pharmaceutical grade liquid, suitable for infusion into a patient's blood circulatory system, with a concentration of albumin at least sufficient to maintain a prescribed albumin concentration in the patient's blood circulatory system.

12. An extracorporeal blood circuit for the filtration of a patient's blood comprising:

a circuit operable to remove and to return a portion of a patient's blood supply;

5 a blood filter operably coupled with the circuit to allow the portion of the patient's blood to flow therethrough;

the blood filter having an effective molecular cutoff sufficiently large to sieve more than a nominal amount of target complex molecules from the portion of the patient's blood;

the effective molecular weight cutoff less than approximately five million Daltons; and

a source for infusing corresponding clean target receptor molecules into the blood circuit.

13. The extracorporeal blood circuit of Claim 12, further comprising the effective molecular weight cutoff less than approximately one million Daltons.

20 14. The extracorporeal blood circuit of Claim 12, further comprising the effective molecular weight cutoff less than approximately five hundred thousand Daltons.

15. A blood filter comprising a membrane having an effective molecular weight cutoff sufficiently large to sieve more than a nominal amount of target complex molecules during hemofiltration and the effective molecular weight cutoff less
5 than approximately one million Daltons.

16. The blood filter of Claim 15 further comprising a hemofilter operable to sieve target complex molecules from a patient's blood to form a filtered blood stream and an
10 ultrafiltrate stream containing target complex molecules.

17. A method for removing target molecules and target complex molecules from a patient's blood, comprising:

circulating a stream of the patient's blood through a very large pore hemofilter having a nominal molecular weight cutoff greater than approximately 150,000 Daltons to sieve target molecules and target complex molecules from the blood stream and the nominal molecular weight cutoff less than approximately 1,000,000 Daltons to avoid removal of significant amounts of immunoglobulins and similar large molecules to prevent increasing the risk of opportunistic infection;

removing an ultrafiltrate containing the target molecules and target complex molecules from the blood stream using the hemofilter;

replacing the ultrafiltrate removed from the blood stream with a replacement fluid having clean target receptor molecules;

providing sufficient clean albumin to maintain adequate plasma oncotic pressure; and

providing the clean albumin and clean target receptor molecules to attract additional inflammatory mediators and toxins from tissue spaces and tissue binding sites in a patient.

18. The method of Claim 17 further comprising infusion of the replacement fluid directly into the patient.

19. The method of Claim 17 further comprising infusion of the replacement fluid into a blood flow circuit associated with the hemofilter.

5 20. The method of Claim 17 further comprising infusion of the replacement fluid directly into the patient and into a blood flow circuit associated with the hemofilter.

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